

What is claimed is:

1. A photometric measurement flow cell comprising:

a cell body having a first end and a second end;

a fluidic channel allowing the passage of fluids, contain within said cell body;

an element holder contained within said first end of said cell body;

a stepped element having a stem, said stem having an end surface;

said stepped element contained within said element holder with said stem protuding into
said fluidic channel creating a measurement path-length.

2. The photometric measurement flow cell according to claim 1, wherein said stepped element is
formed of fused silica glass.

3. The photometric measurement flow cell according to claim 1, wherein said stepped element is
formed of plastic.

4. The Photometric measurement flow cell according to claim 1, wherein said stepped element is
formed of crown optical glass.

5. The Photometric measurement flow cell according to claim 1, wherein said stepped element is
formed of flint optical glass

6. The Photometric measurement flow cell according to claim 1, wherein said stepped element is formed of BK7 optical glass

7. The Photometric measurement flow cell according to claim 1, wherein said stepped element is formed of sapphire optical glass

8. The photometric measurement flow cell according to claim 1, wherein said end surface is a plano optical surface.

9. The photometric measurement flow cell according to claim 1, wherein said end surface is a spherical optical surface.

10. The photometric measurement flow cell according to claim 1, wherein said end surface is an aspherical optical surface.

11. The photometric measurement flow cell according to claim 1, wherein said stepped element is circular in cross-section.

12. The photometric measurement flow cell according to claim 1, wherein said stepped element is a geometric configuration selected from the group consisting of a square, rectangular, octagonal, and hexagonal.

13. The photometric measurement flow cell according to claim 1, wherein said element holder contains within it a entrance lens.

14. The photometric measurement flow cell according to claim 1, wherein within said cell body is a lens holder containing an exit lens.

15. A stepped element for a measurement flow cell comprising:

a base having a circumference, said base having a first end and second end;

a stem having a length, an end, and a circumference;

said stem afixed to said base on said first end;

said stem circumference being less than said base circumference resulting in a difference;

and

said difference forming a sealing surface on said first end.

16. The stepped element for a measurement flow cell according to claim 15, wherein said stem length determines measurement path-length in said measurement flow cell.

17. The stepped element for a measurement flow cell according to claim 15, wherein said base is circular in cross-section.

18. The stepped element for a measurement flow cell according to claim 15, wherein said stem is circular in cross-section.

19. The stepped element for a measurement flow cell according to claim 15, wherein said stem is concentric to said base.

5 20. The stepped element for a measurement flow cell according to claim 15, wherein said stem is non-concentric to said base.

21. A method of creating an accurate measurement path-length within a flow cell, which comprises:

selecting a stepped element having a stem height;

10 determining an existing measurement path-length of said flow cell; and

adjusting said stem height to achieve desired measurement path-length.

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